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JOINT PHOTOGRAPHIC INTELLIGENCE REPORT

ELECTRONIC INSTALLATIONS

CANTON, CHINA

ARMY NAVY CIA

PIC/JR-4/59

MAY 1959

[redacted] 25X1

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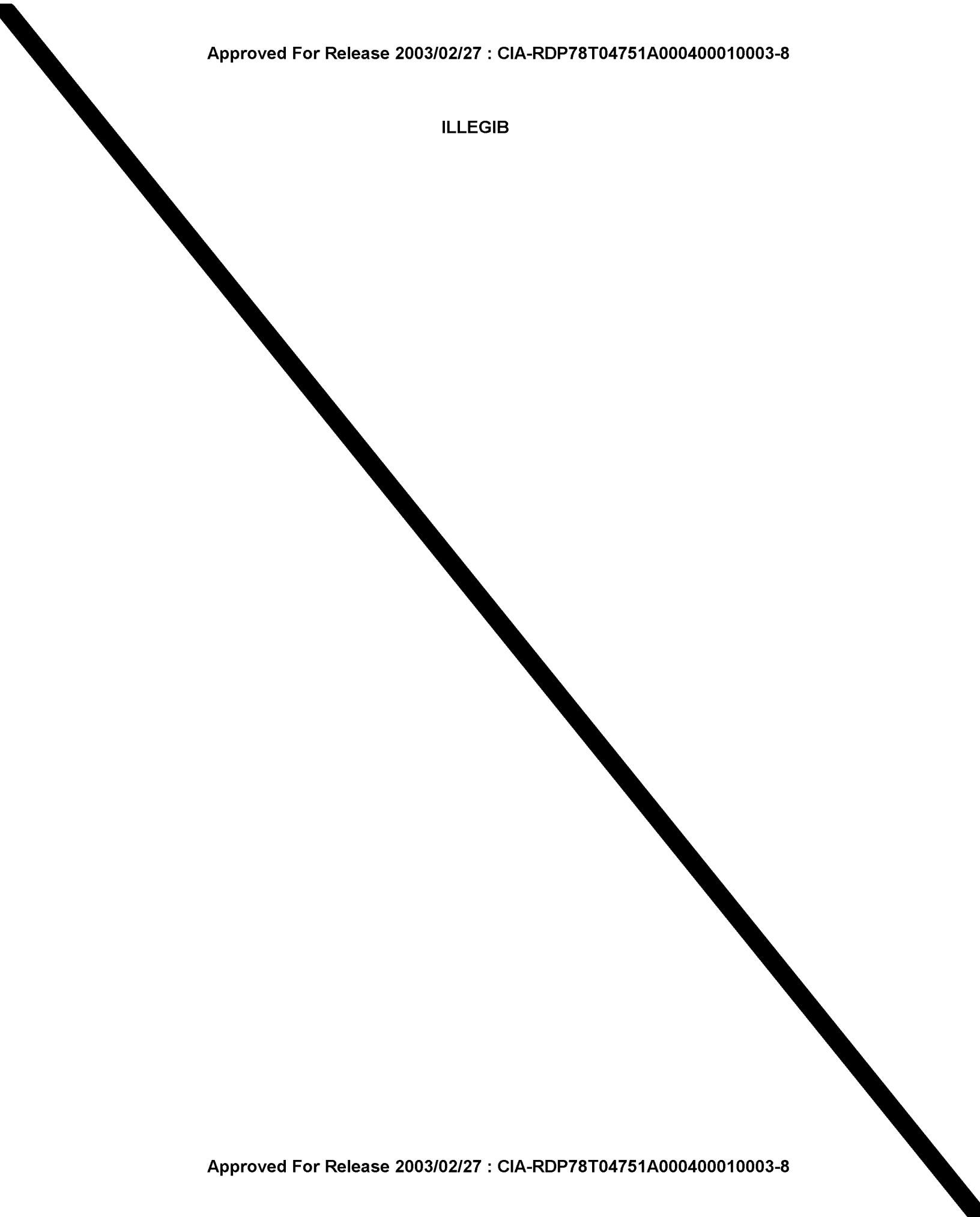

ELECTRONIC INSTALLATIONS

CANTON, CHINA

PIC/JR-4/59

MAY 1959

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FIG. 1

PIC/JR-4/59

ELECTRONIC INSTALLATIONS
CANTON, CHINA

I. INTRODUCTION

This Joint Photographic Intelligence Report has been prepared by Army, Navy, and CIA under Army chairmanship, in response to that portion of ACSI/DA SRI-172-8-58 which requests a study of electronic installations in the vicinity of Canton. The electronic installations described in this report on the basis of [redacted] photography are located at 23°07'N/113°09'E, approximately four nautical miles (nm) west of Canton (Figures 1 and 2). They include a receiving station, a direction finder, and a transmitting station. Examination of previous photographic coverage indicates that these facilities have been constructed [redacted] 25X1D

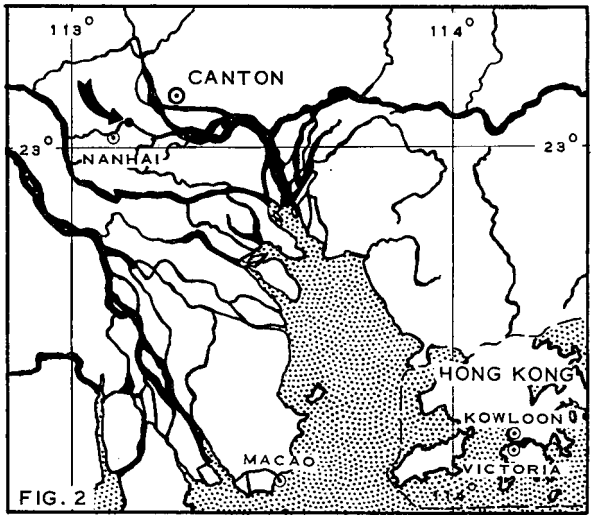

FIG. 2

II. RECEIVING STATION

The receiving station, located approximately 3.5 nm west of Canton, consists of a 45-acre antenna farm surrounding a walled operations area measuring 285 by 195 feet (Figure 3). A walled support area 440 by 420 feet is located on the southern perimeter of the antenna farm. Antennas include five single-bay fishbone antennas and four V-shaped groups of three stick masts each.

Single-bay fishbone antennas are best suited for reception of point-to-point, long-range transmissions. They are capable, however, of receiving signals from points within a 30° arc in either direction from the long axis of the array. The five fishbone antennas at this station

are arranged in a roughly circular pattern which would give the station a capability of receiving signals throughout a 360° arc, provided the antennas are capable of reception in either direction.

The V-shaped groups of masts probably support either V-beam antennas or two horizontal dipole antennas, utilizing the pole at the apex as a common support. If the fishbone antennas do not receive from both directions, then the primary purpose of these V-shaped groups of masts is probably to serve as gap fillers between the fishbones.

A. Antennas

Antennas at this site are indicated in Figure 3 by lettered groups of dots which represent the location of stick masts. Orientation of the single-bay fishbone antennas is measured along the long axis of the arrays; orientation of the V-shaped groups of stick masts is measured along the extension of a line bisecting the "V". Antenna dimensions are indicated below.

25X1D

B. Structures

Structures in the receiving station consist of a receiver building and two smaller buildings within the operations area, and fourteen buildings, a self-supporting lattice tower, and a concrete hardstand within the support area. The structures, indicated on Figure 3 by numbers, are identified as follows:

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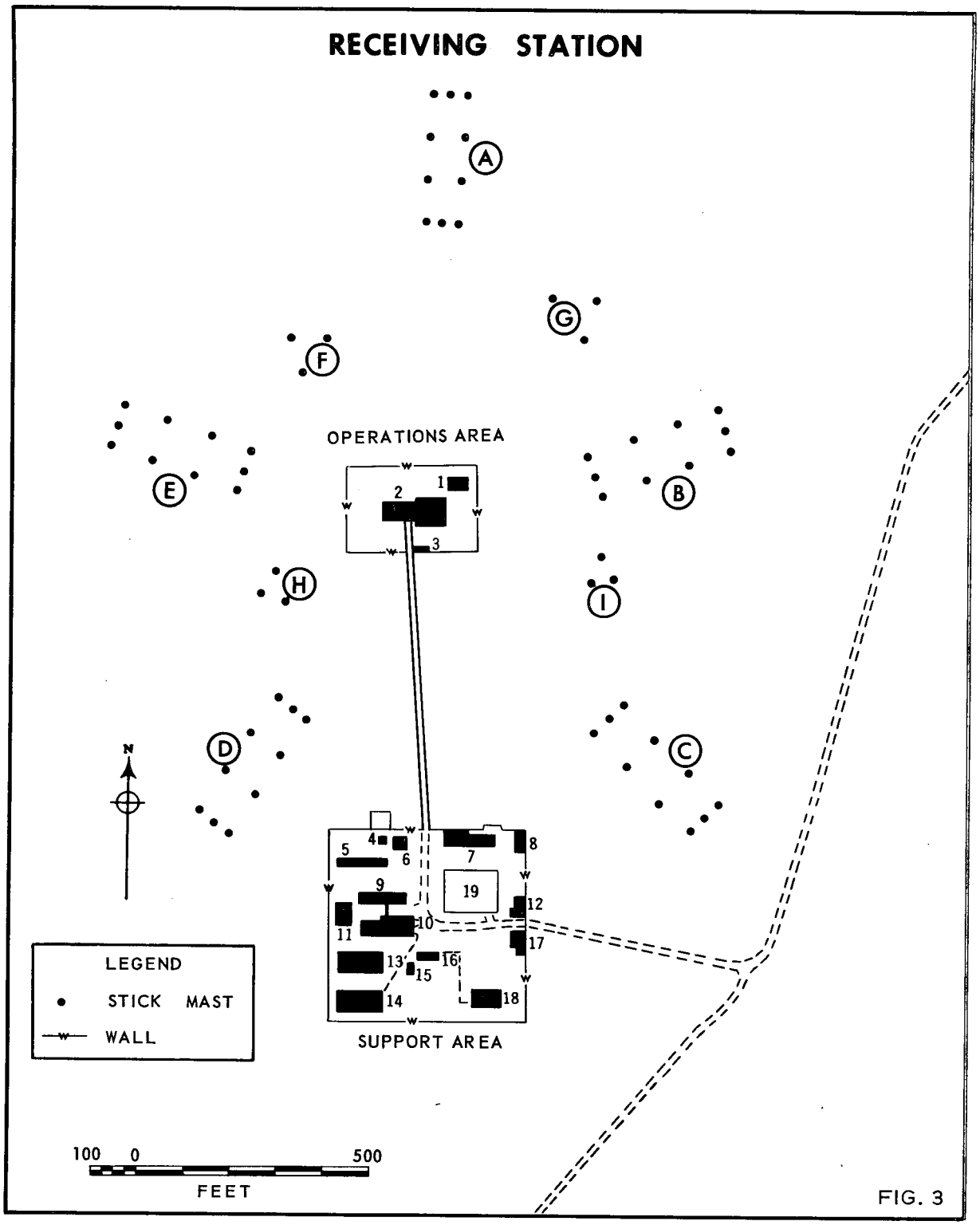

FIG. 3

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No.	Description	Probable Use
1	Single-story, gable-roofed building, 45' x 35'	Unknown
25X1D 2	Multistory, gable-roofed, T-shaped building; bar [redacted]	Receiver building
25X1D 3	Single-story, flat-roofed, building [redacted]	Security
25X1D 4 25X1D	Lattice tower, [redacted] with flat roof [redacted] square; detail under roof is not discernible	Unknown
5	Single-story, gable-roofed, barracks-type building, 115' x 20'	Billets
25X1D 6	Single-story, flat-roofed building [redacted] square	General purpose
25X1D 7 25X1D	Multistory, combination flat- and gable-roofed building; base [redacted] extensions [redacted]	Administrative
25X1D 8	Single-story, gable-roofed building [redacted]	Unknown
25X1D 9 25X1D 25X1D	Single-story, gable-roofed, irregular-shaped building; base [redacted] extensions [redacted] [redacted]	Administrative
25X1D 10 25X1D 25X1D	Single-story, flat- and gable-roofed, irregularly-shaped building; base [redacted] connected to building 9 by a covered passageway [redacted]	Administrative
25X1D 11	Single-story, gable-roofed building [redacted]	Administrative
25X1D 12 25X1D	Single-story, flat-roofed, L-shaped building; bar [redacted] leg [redacted] square	Administrative or security
13,14 25X1D	Multistory, gable-roofed, barracks-type buildings [redacted]	Billets
25X1D 15	Single-story, flat-roofed building [redacted]	General purpose
25X1D 16	Single-story, gable-roofed building [redacted]	Unknown
17 25X1D	Single-story, flat-roofed, L-shaped building; bar [redacted]	Administrative or security

25X1

No.	Description	Probable Use
18	Multistory, gable-roofed, barracks-type building [redacted]	Billets
19	Concrete hardstand, 125' x 100'	Vehicle Park

25X1D

C. Miscellaneous

The antenna farm itself does not appear to have any security fencing; however, the operations and support areas are both walled. There is no evidence of feed lines or cable scars visible on the photography.

III. TRANSMITTING STATION

This station, located 2.8 nm west-southwest of Canton and 1.8 nm south of the receiving station, consists of an antenna farm covering approximately 60 acres and a walled area 160 feet square containing a transmitter building, two smaller support buildings, and a cooling pond (Figure 4). The antenna farm contains four groups of three stick masts each arranged in a V-shaped pattern, located in a semicircle north of the walled area, and two linear groups of three stick masts each located south of the walled area. Immediately adjacent to the transmitting station are several probable military areas under construction and a small barracks area.

The V-shaped groups of masts probably support V-beam antennas or horizontal dipole antennas, using the pole at the apex as a common support.

The two linear groups of three stick masts each probably support horizontal dipole antennas. No crossarms are visible, thus precluding the likelihood of curtain arrays.

A. Antennas

Antennas and probable antennas at this site are indicated in Figure 4 by lettered groups of dots which represent locations of stick masts. Orientation of the V-shaped groups of stick masts is measured along the extension of a line bisecting the "V"; orientation of the linear groups of three stick

masts each is measured along the perpendiculars to the long axis of each line of masts.

25X1D [redacted]

B. Structures

Structures in the walled area are numbered on Figure 4 and are identified as follows:

No.	Description	Probable Use
1	Multistory, valley-roofed, building, 50' x 35'	Transmitter building
2	Single-story, gable-roofed building, 30' x 25'	Administrative
25X1D 3	Irregular-shaped cooling pond, [redacted] diameter	
4	Single-story, gable-roofed, barracks-type building [redacted] 25X1D	Billets

C. Miscellaneous

As in the receiving station, the antenna farm itself does not appear to be secured, but the transmitter building, support buildings, and cooling pond are fenced.

IV. DIRECTION FINDER

The direction finder, located 1.5 nm west of the receiving station, 25X1D consists of a small control building [redacted] within a circular

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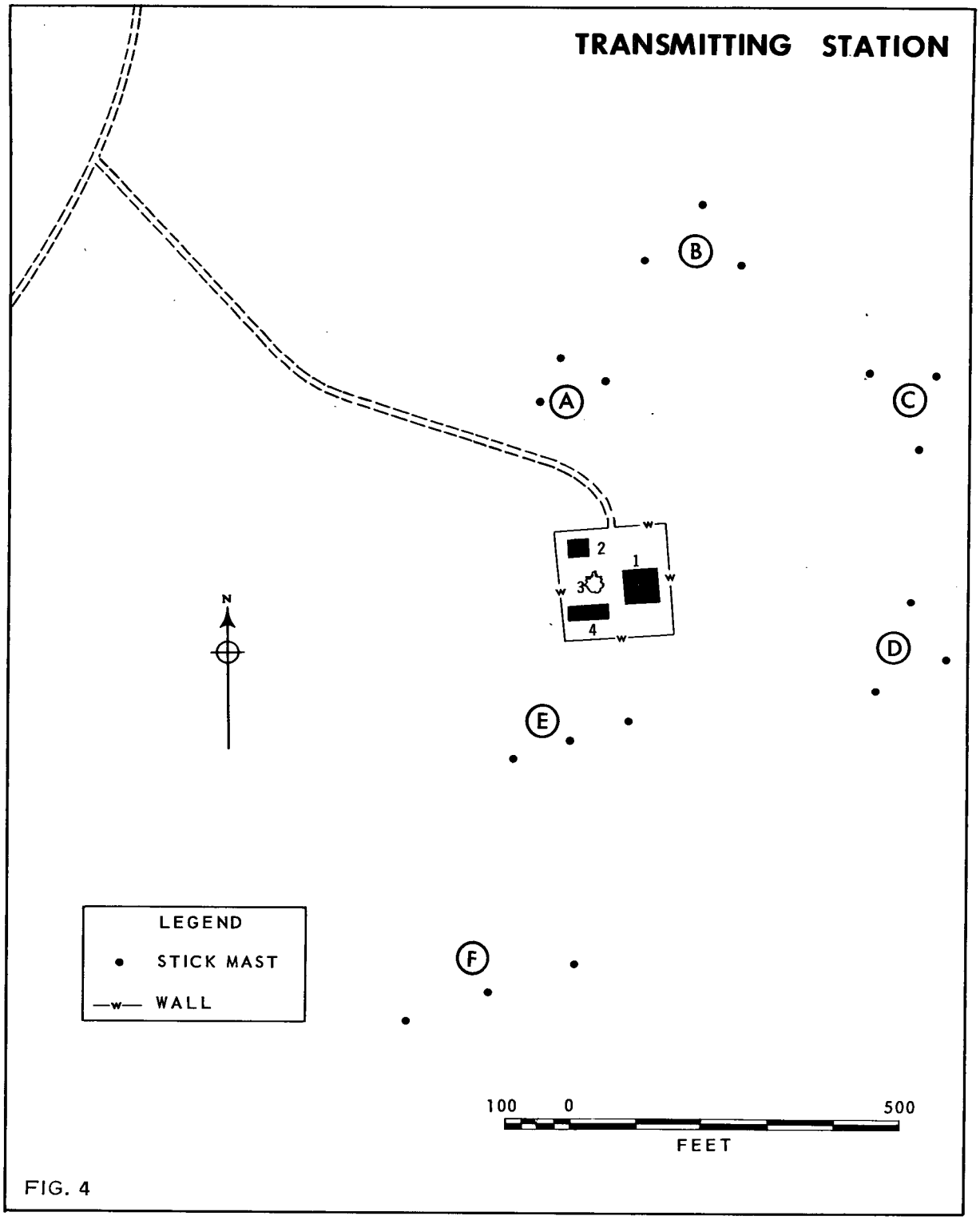

FIG. 4

TOP SECRET
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25X1

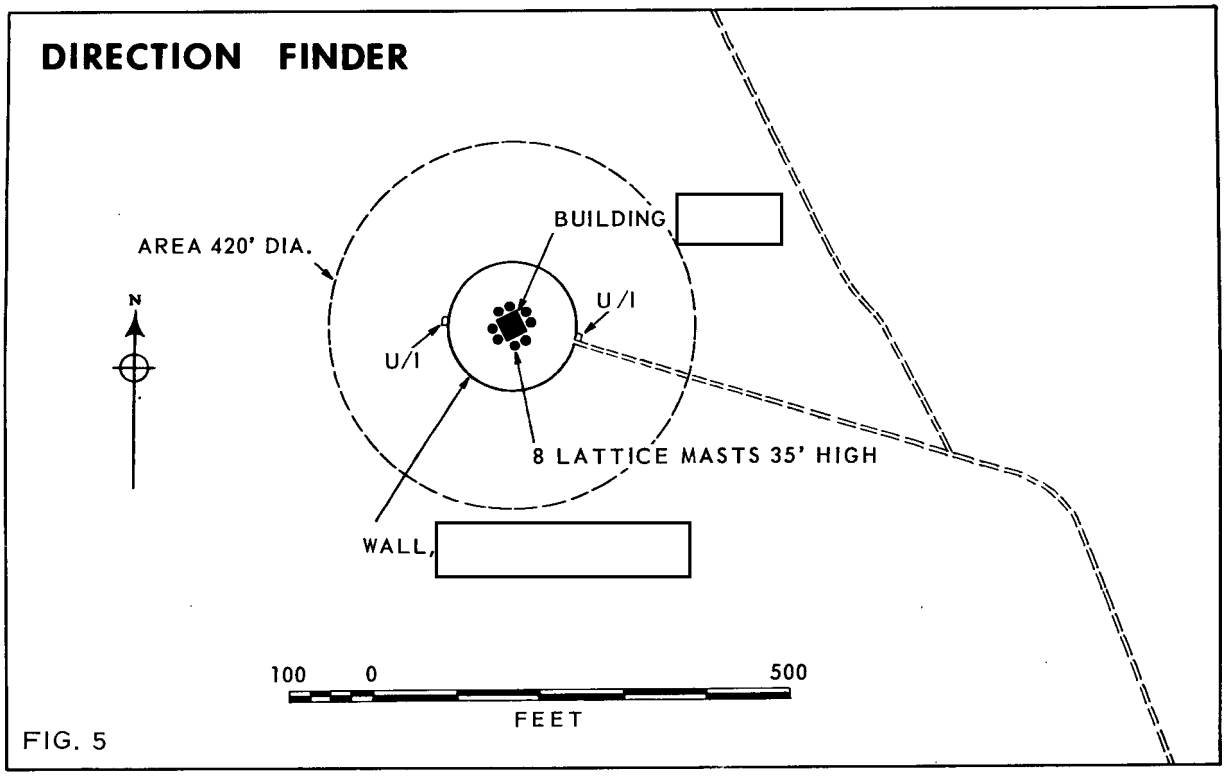

FIG. 5

25X1D walled area (Figure 5). Surrounding the building are eight lattice masts, 35 feet high, arranged two to a side. The opposite pairs are 35 feet apart. The area outside the wall is cleared to a diameter of 420 feet. There are no support facilities in the immediate vicinity.

This D/F closely resembles other D/Fs located at Tashkent and Khabarovsk, USSR. It cannot be classified as a conventional "fix eight" D/F station, as the eight lattice towers differ markedly from the slender stick masts found in such stations, but is probably a broad band " fix eight."

25X1D Comparison between coverage
25X1D indicates that construction in the area had been completed recently,
25X1D since freshly scarred ground appearing on photography appears
25X1D grown over on the coverage.

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MAP DATA:

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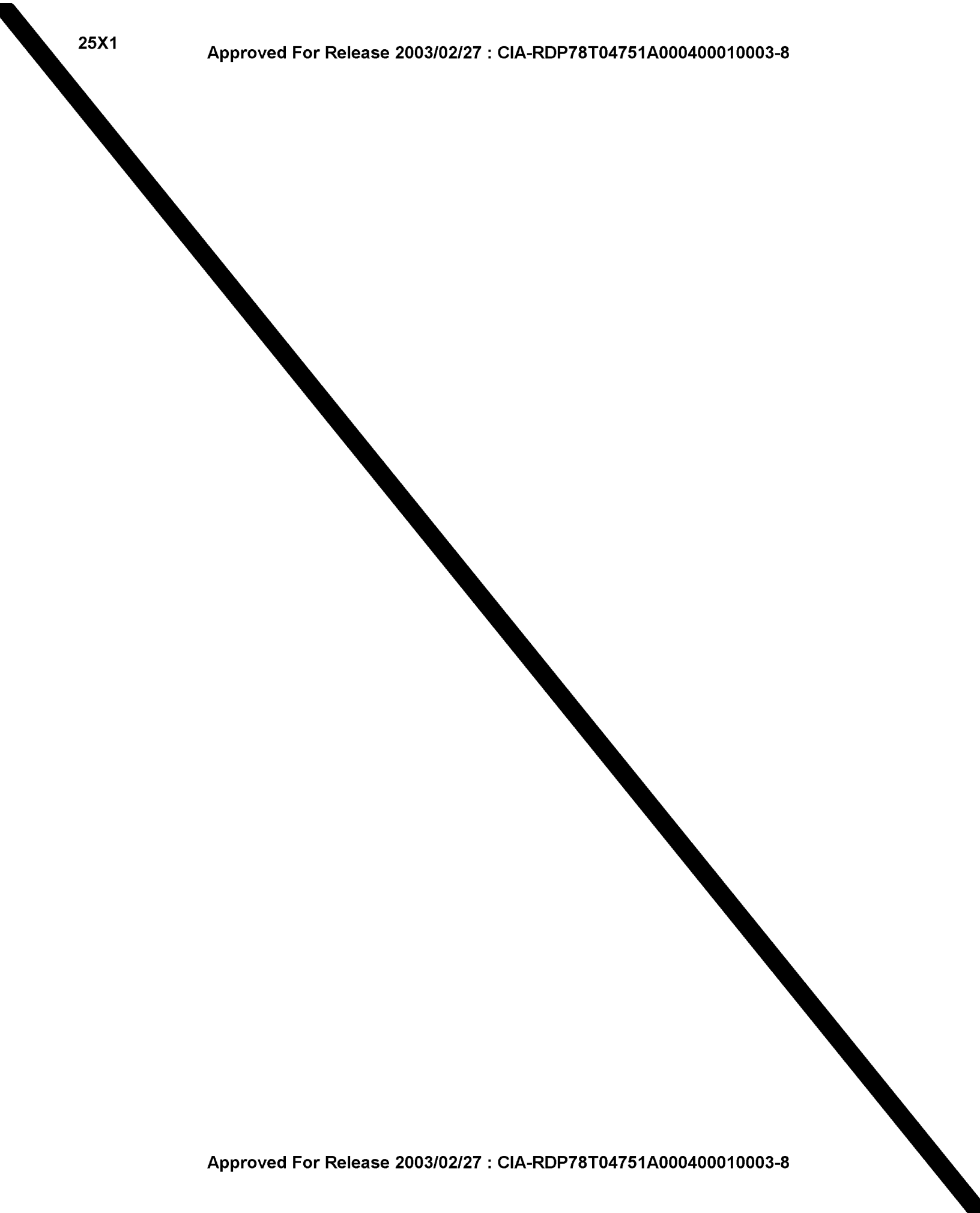
COORDINATES: 23°07'N/113°09'E



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